



Hydrologic Changes in Everglades National Park as a result of the Modified Water Deliveries Project

by

Amy Renshaw and Kevin
Kotun

National Park Service

South Florida Natural Resources Center



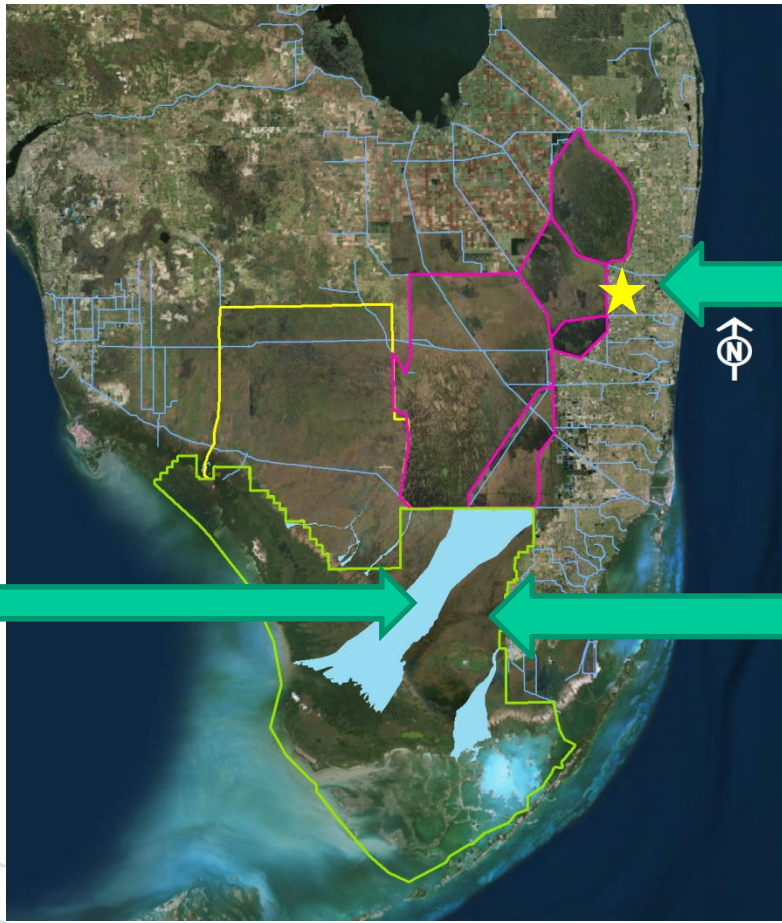
What is the Modified Water Deliveries Project?



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We Are Here

Everglades
National Park

Shark River
Slough

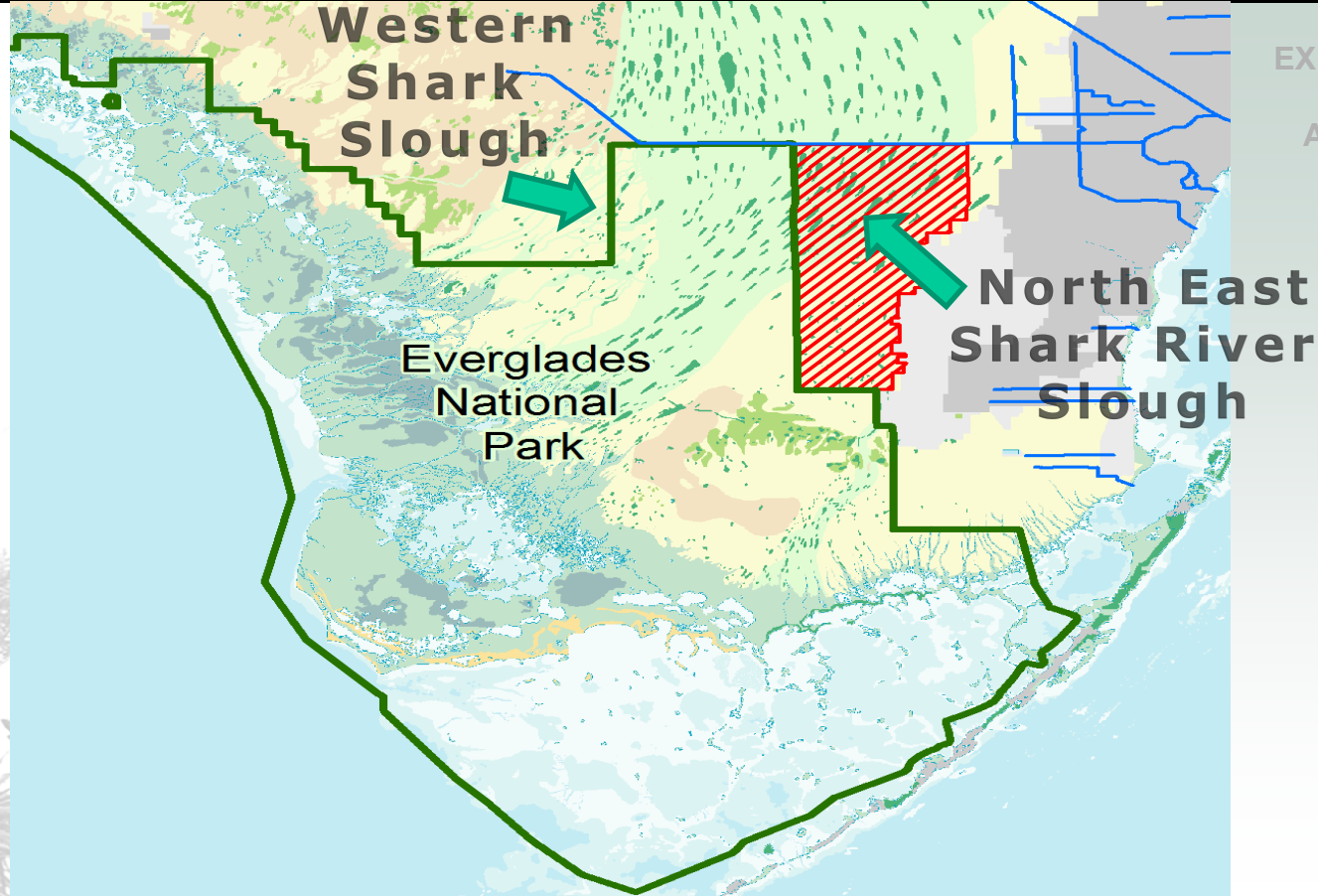
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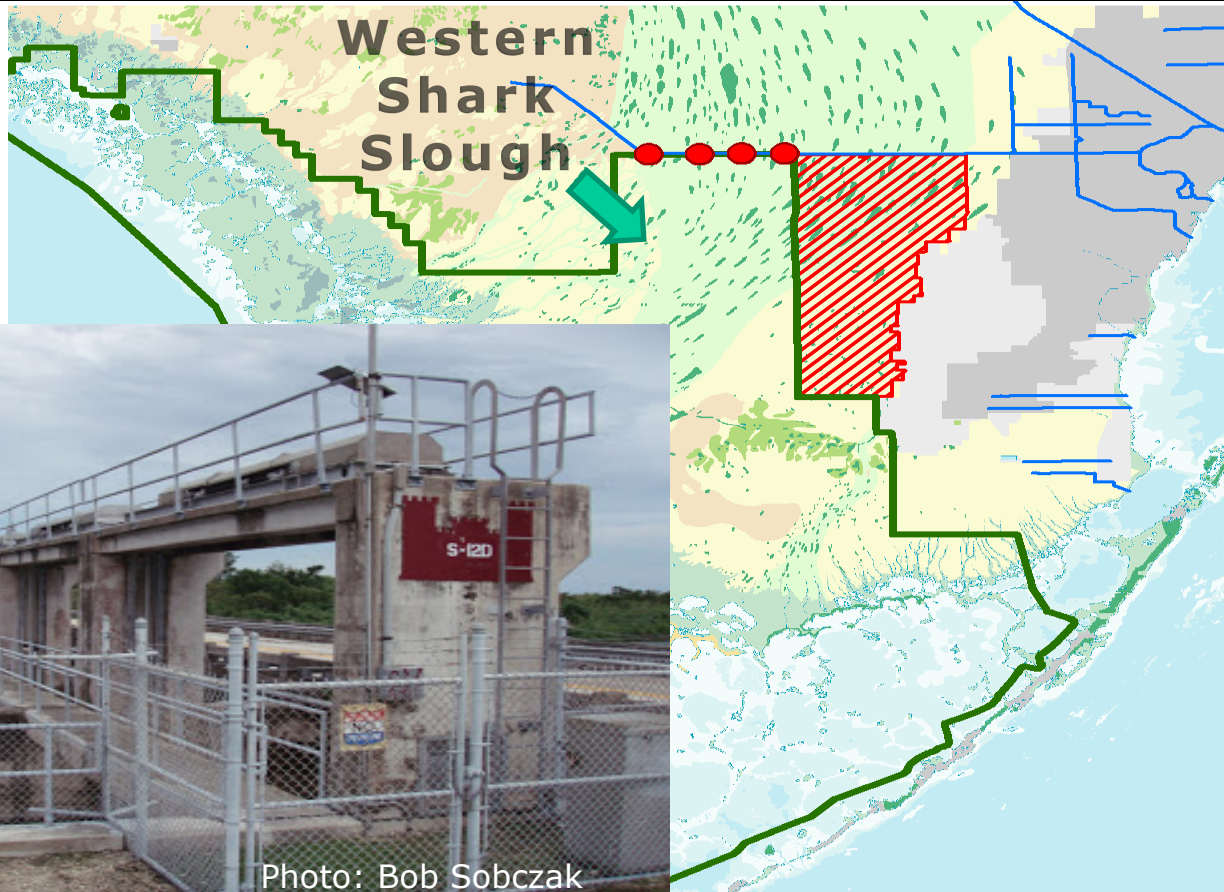


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Western
Shark
Slough



Photo: Bob Sobczak

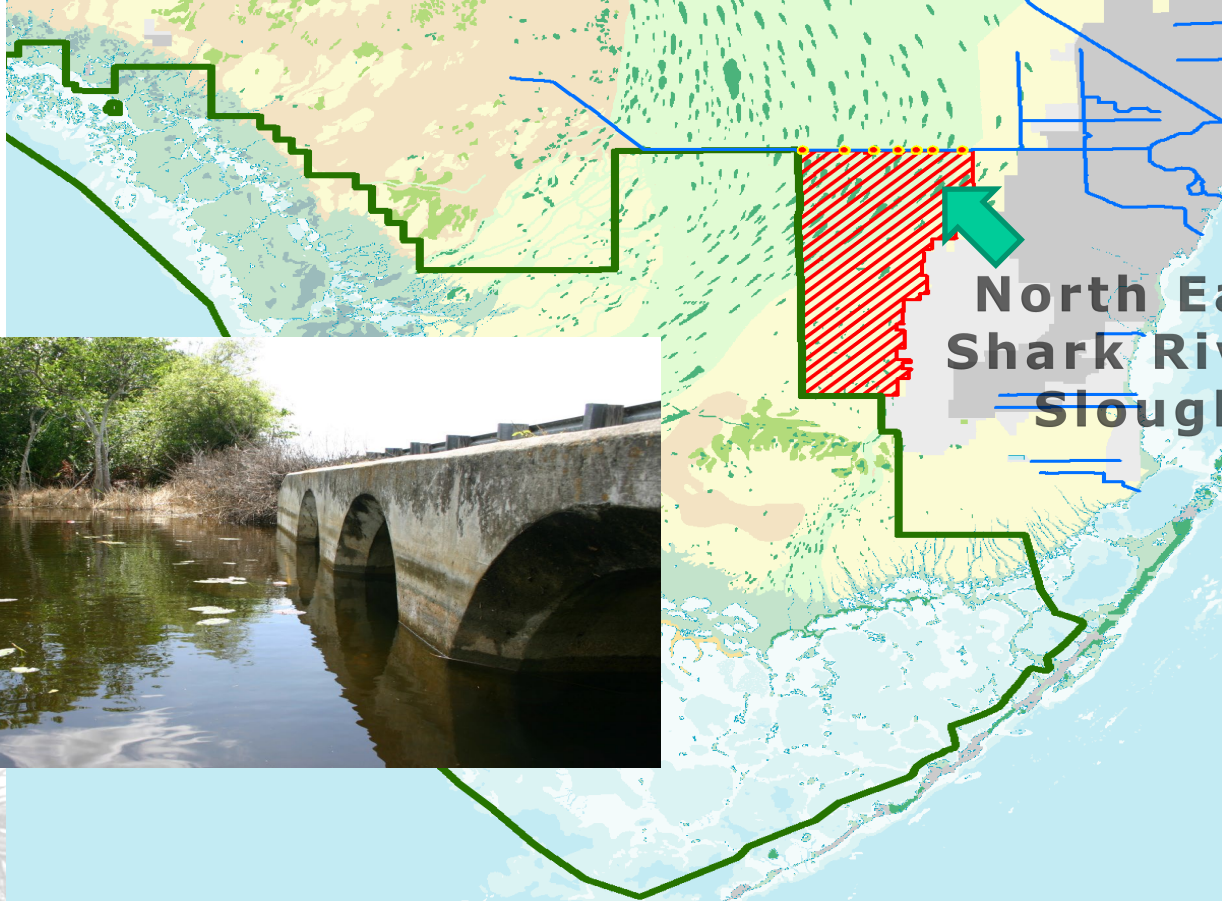
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**North East
Shark River
Slough**



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Goals of the ModWaters project are to:

Increase flows into North East Shark River Slough

1. Increase Water Levels in the Marsh
2. Increase Hydroperiod

Improve distribution of Flow

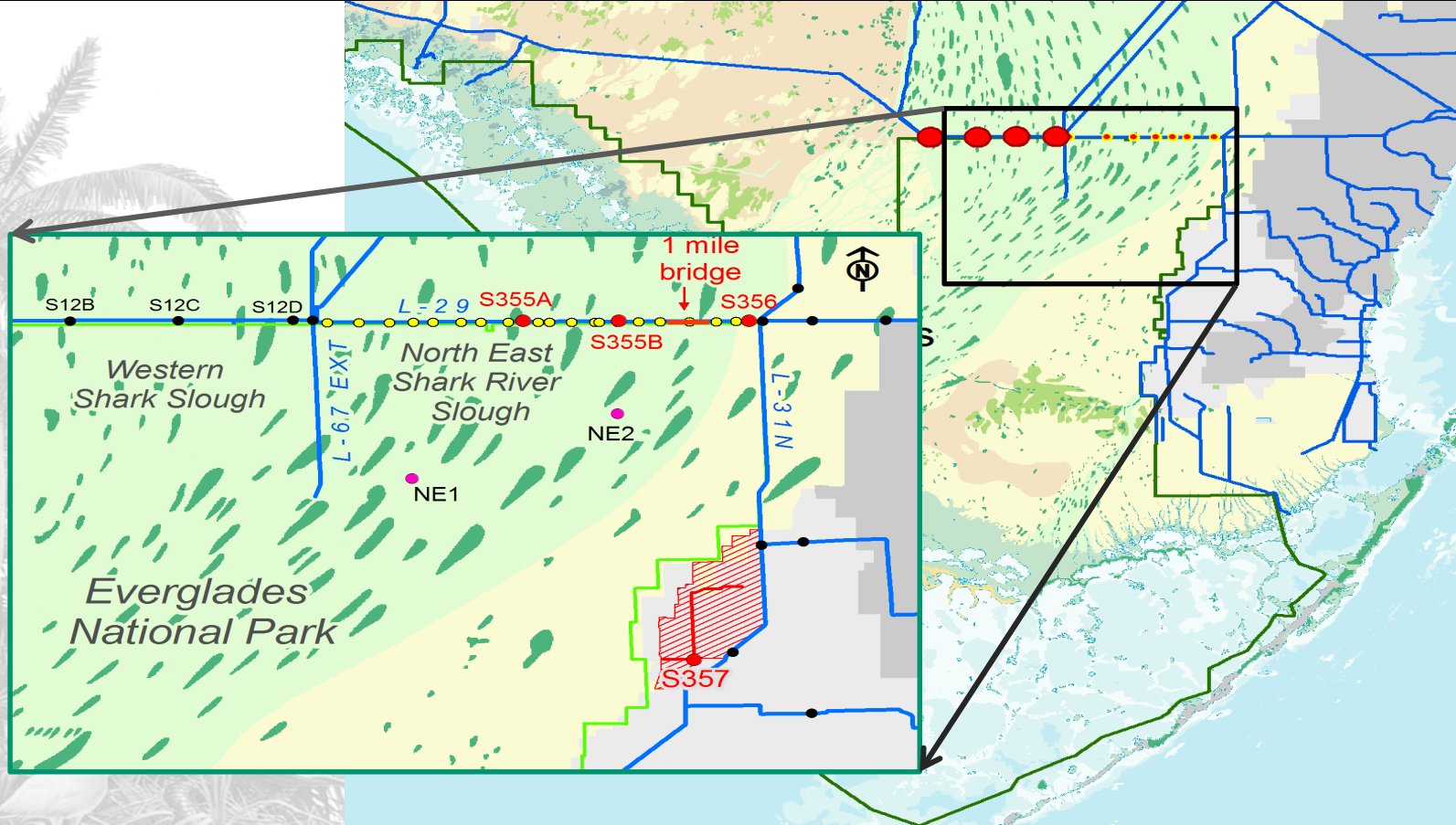
1. Spatially
2. Seasonally

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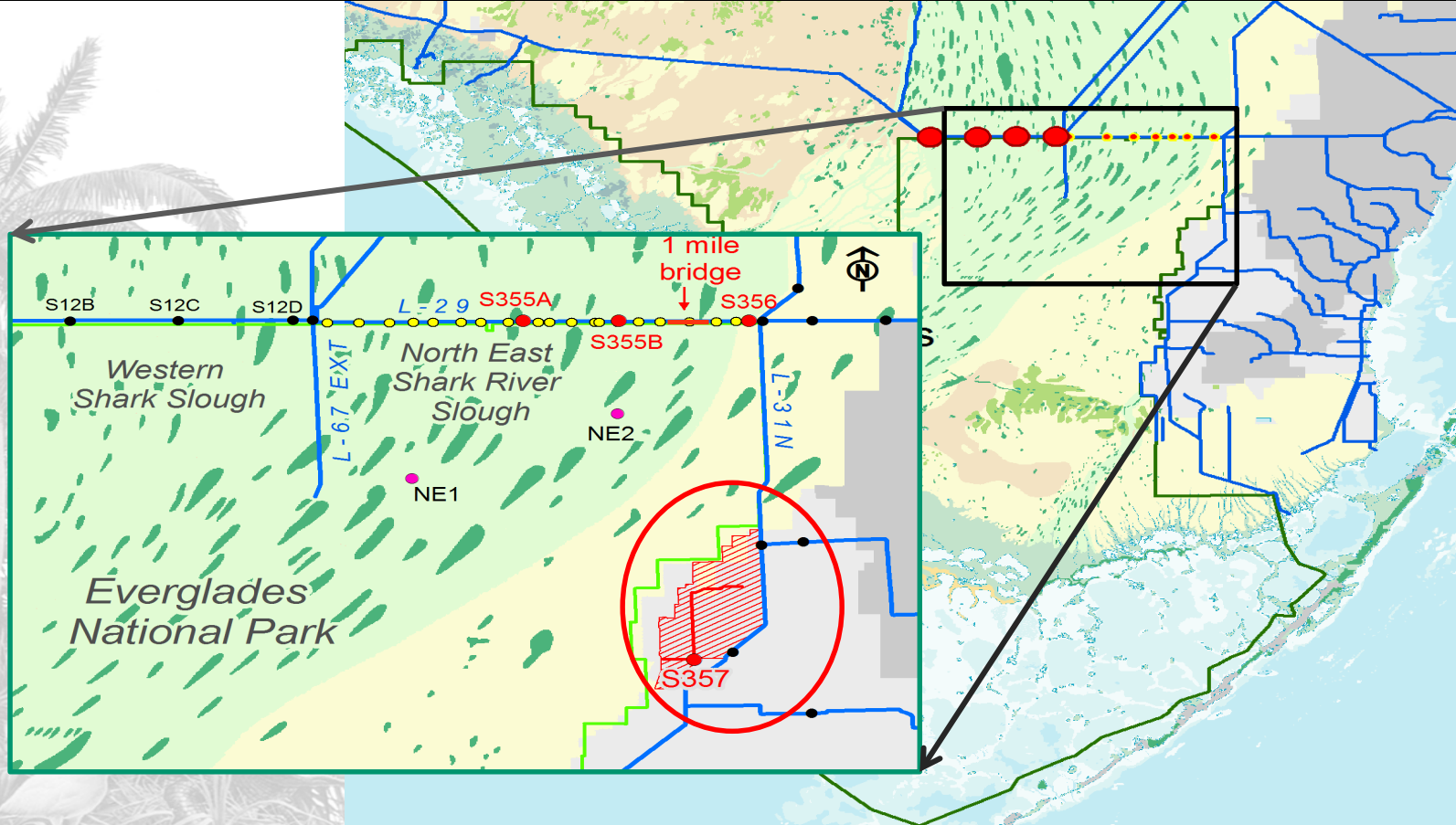


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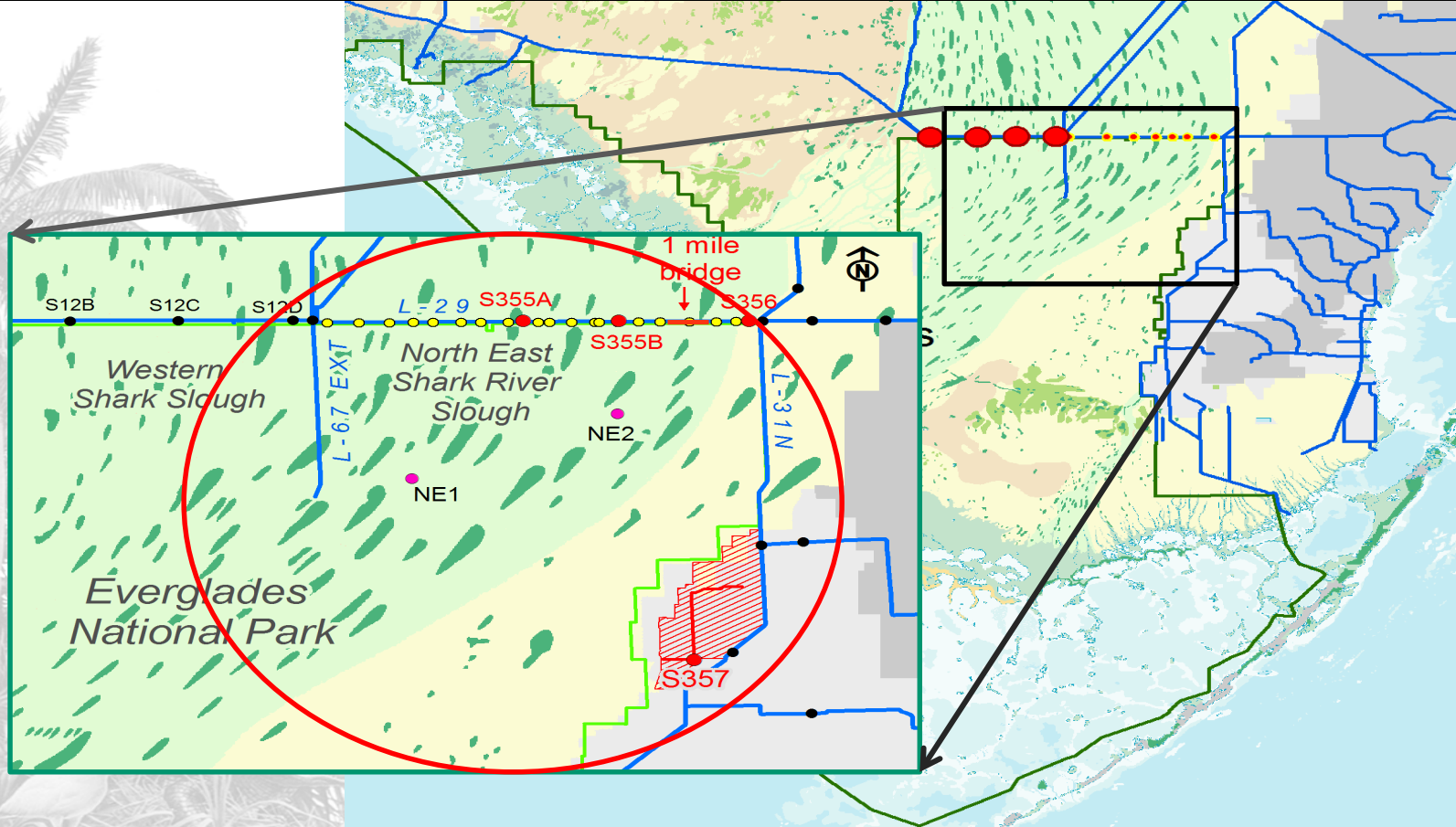


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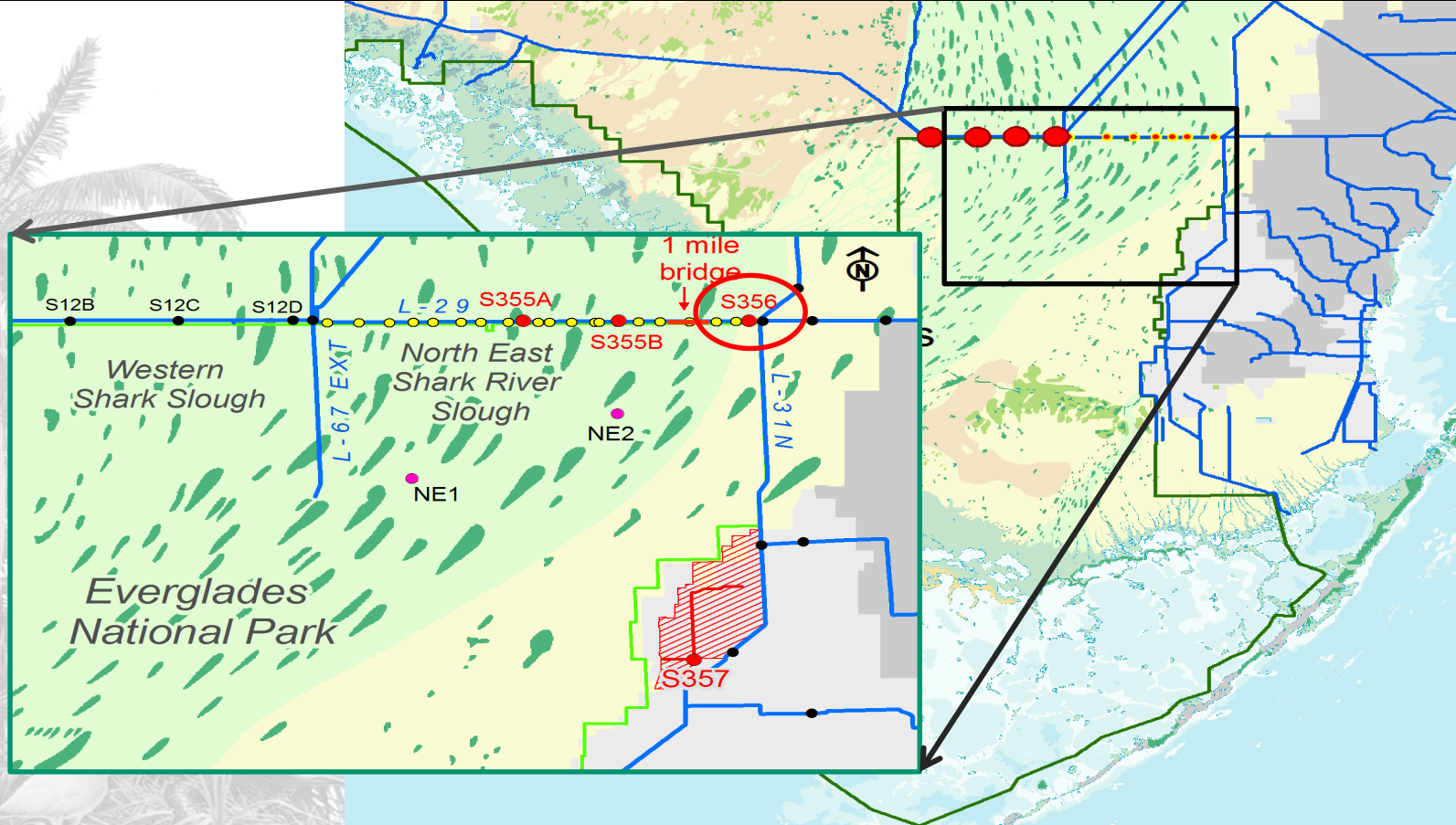


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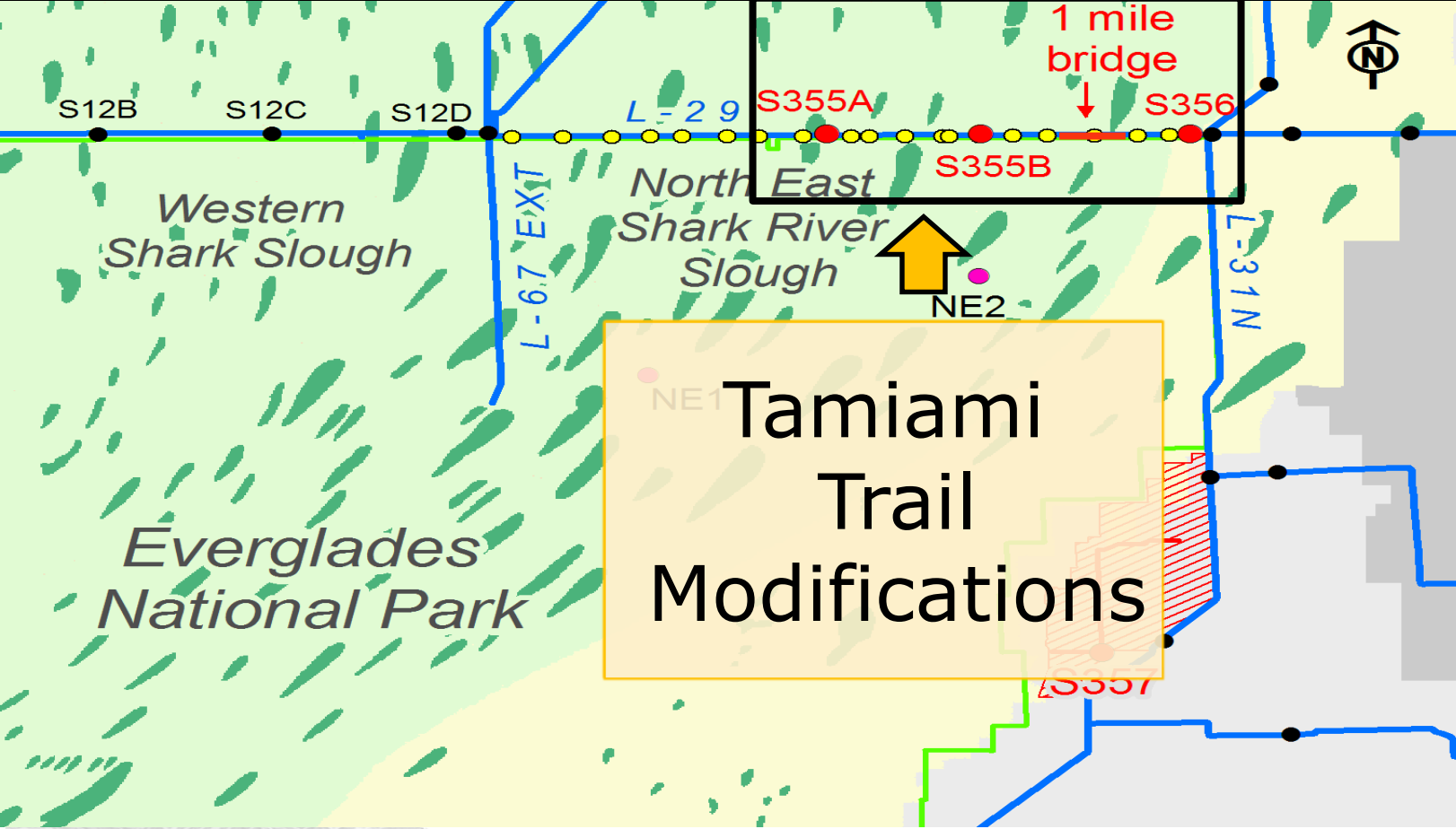


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NE1
**Tamiami
Trail
Modifications**

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Develop
New Operational
Plans

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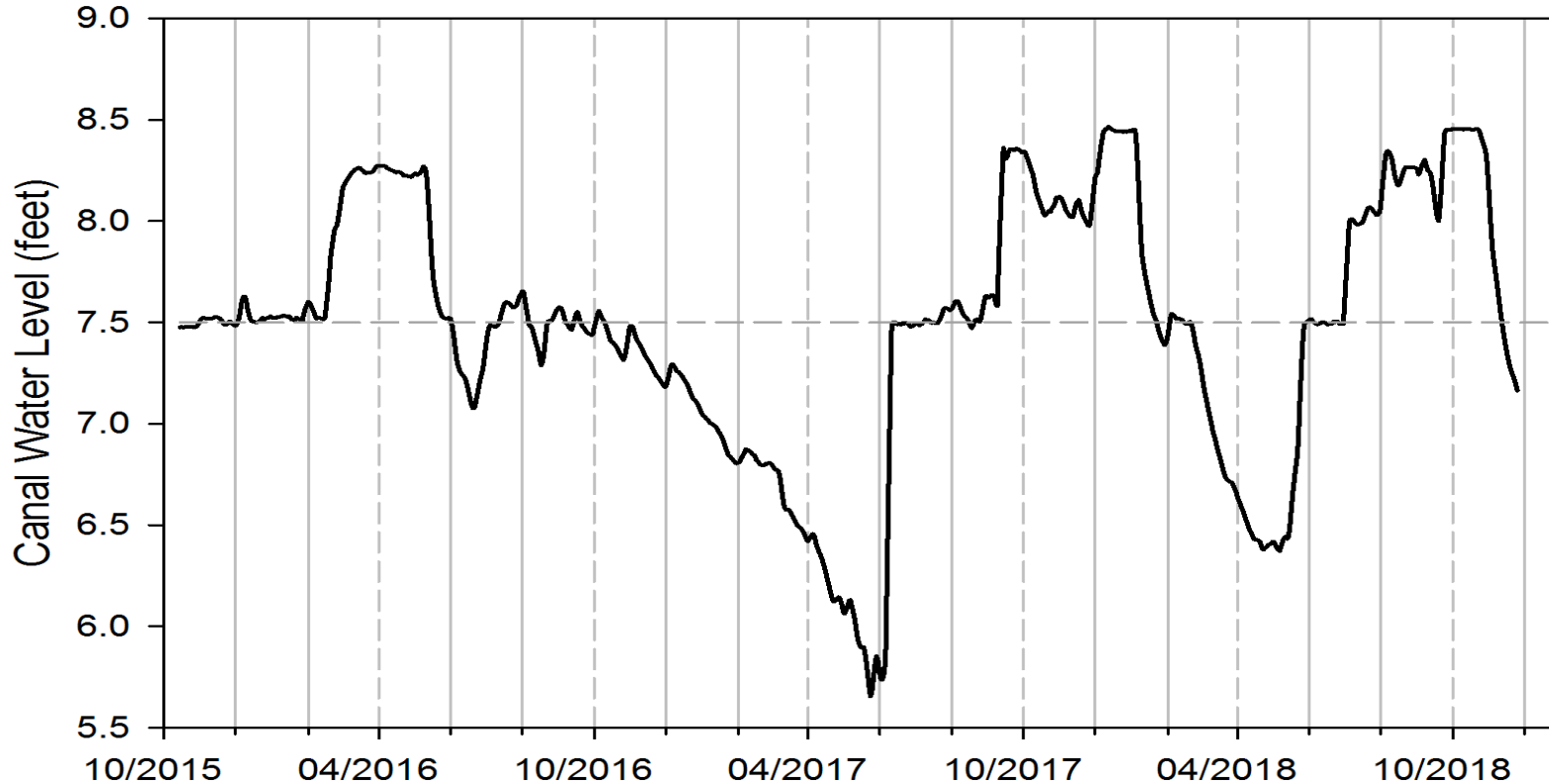
Construction complete on
1 mile bridge in 2013

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Operational Tests began in 2015

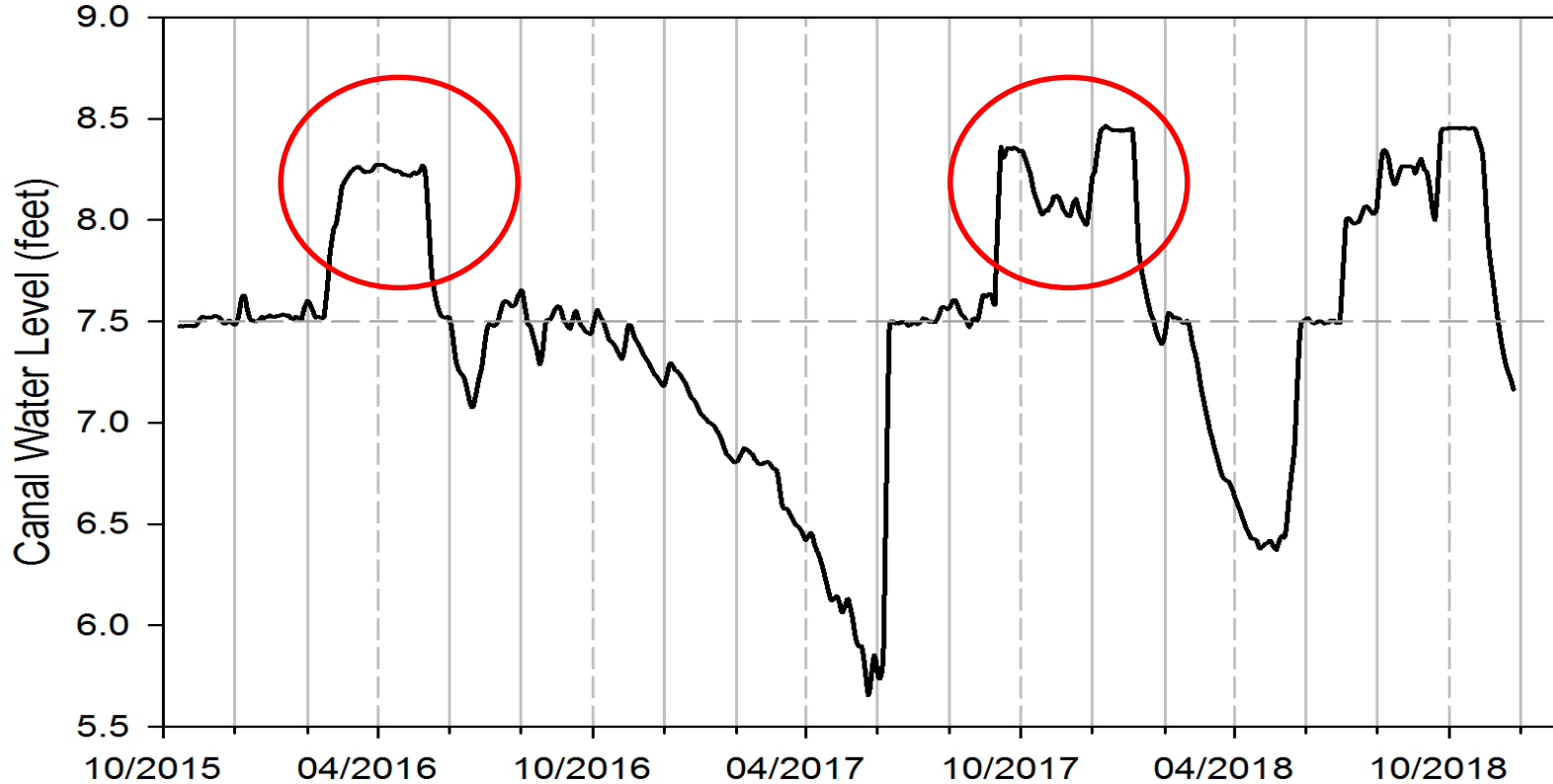


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Operational Tests began in 2015

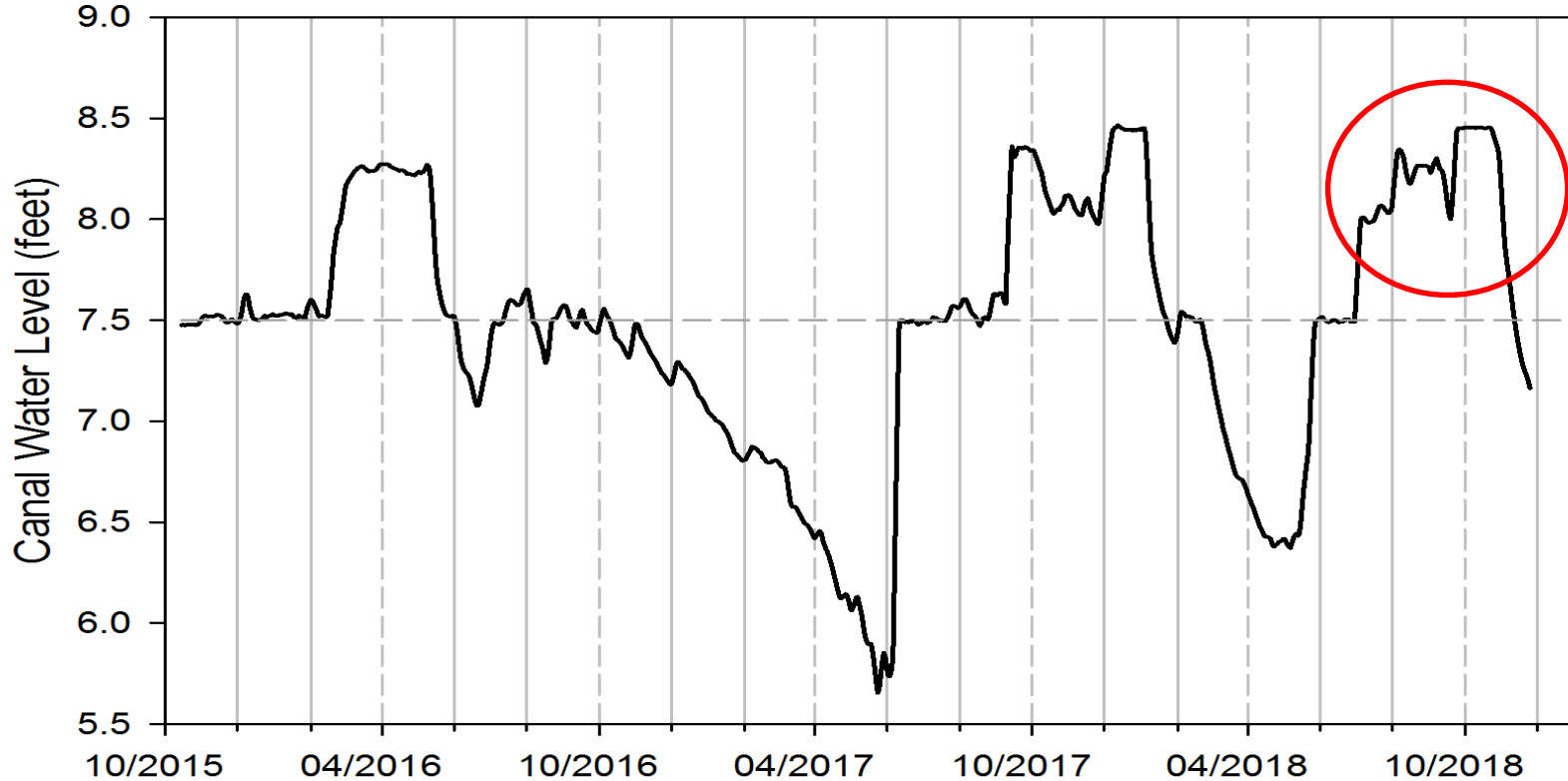
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Operational Tests began in 2015

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Increase flows into NESRS

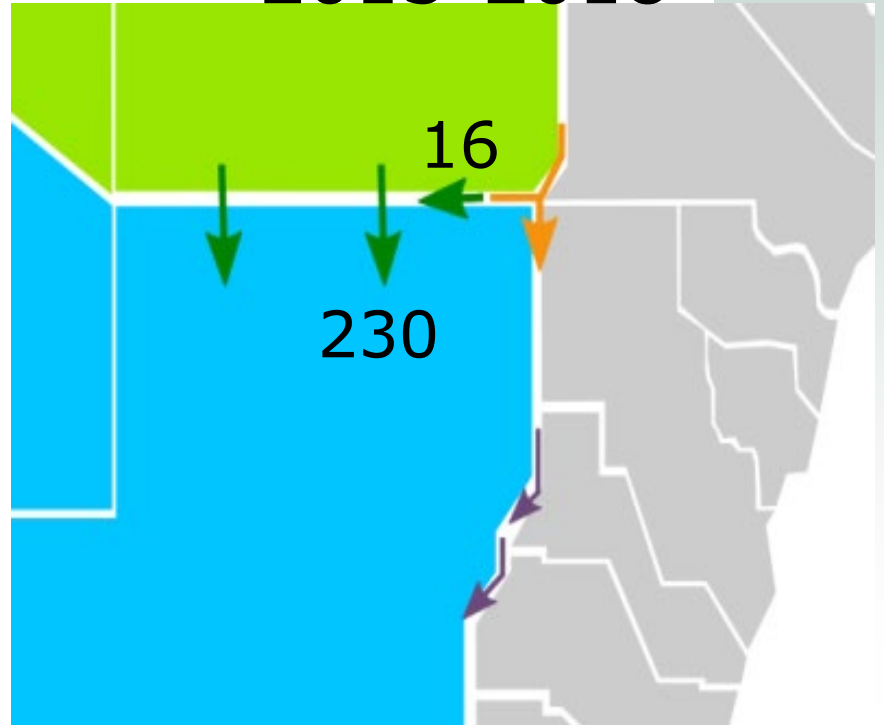
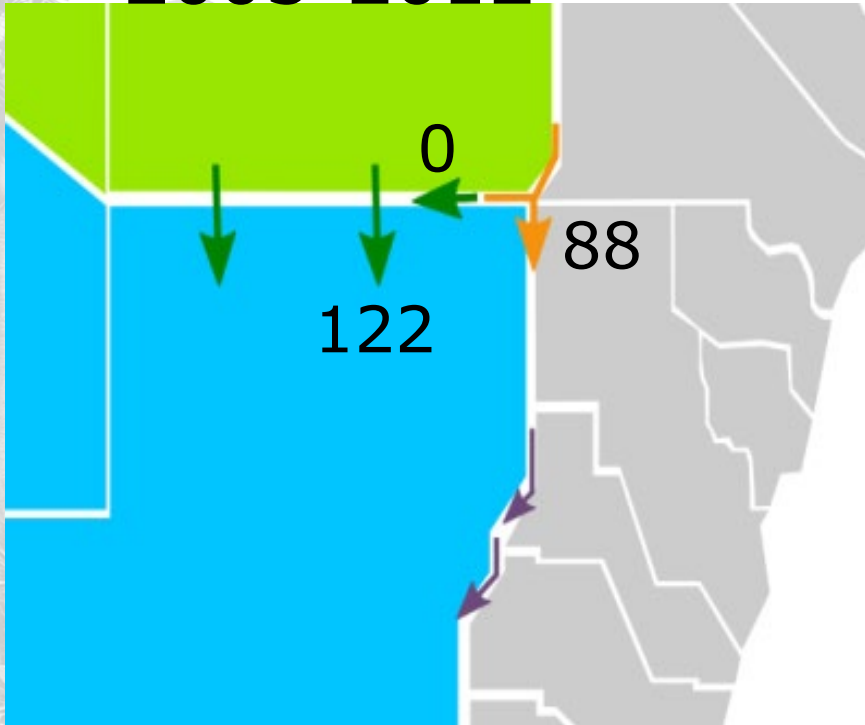


Average Annual Flow in Kaf

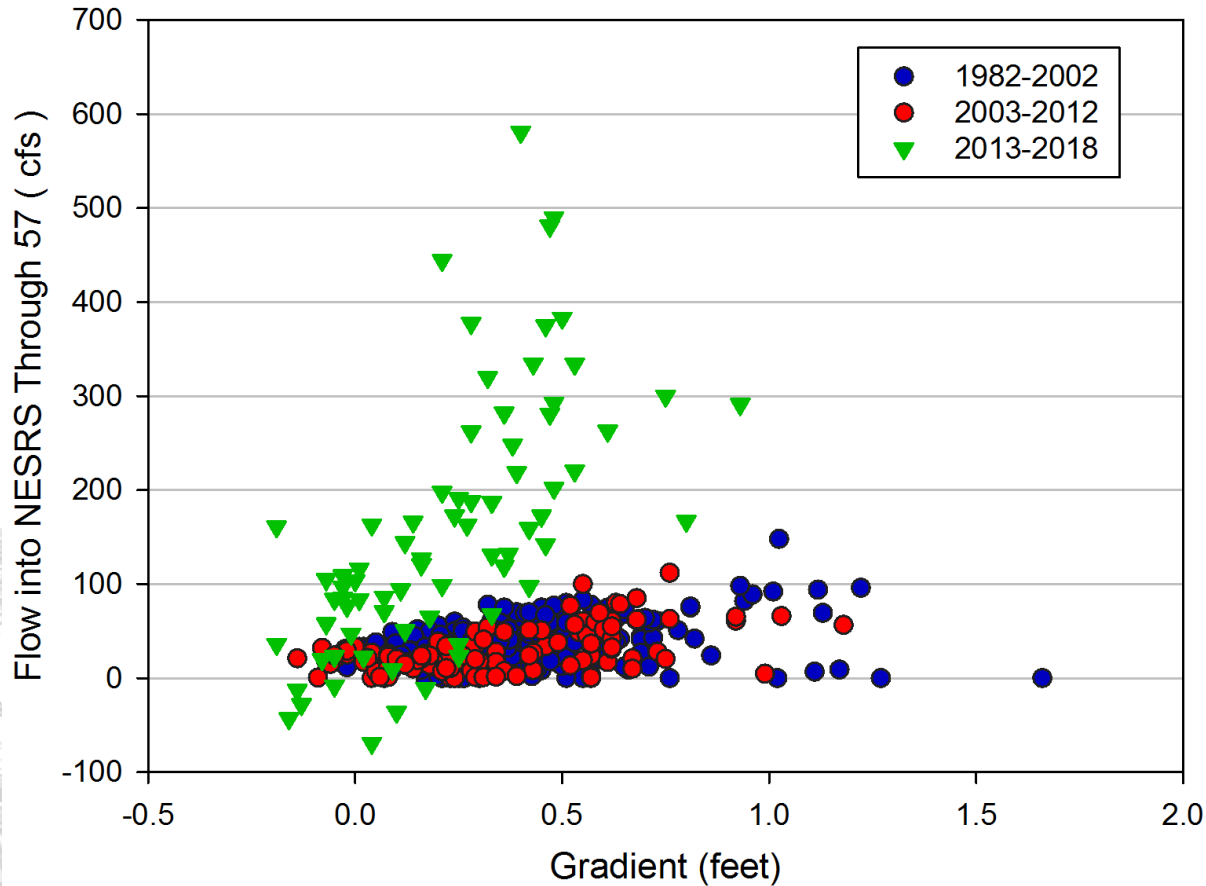
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2003-2012

2013-2018



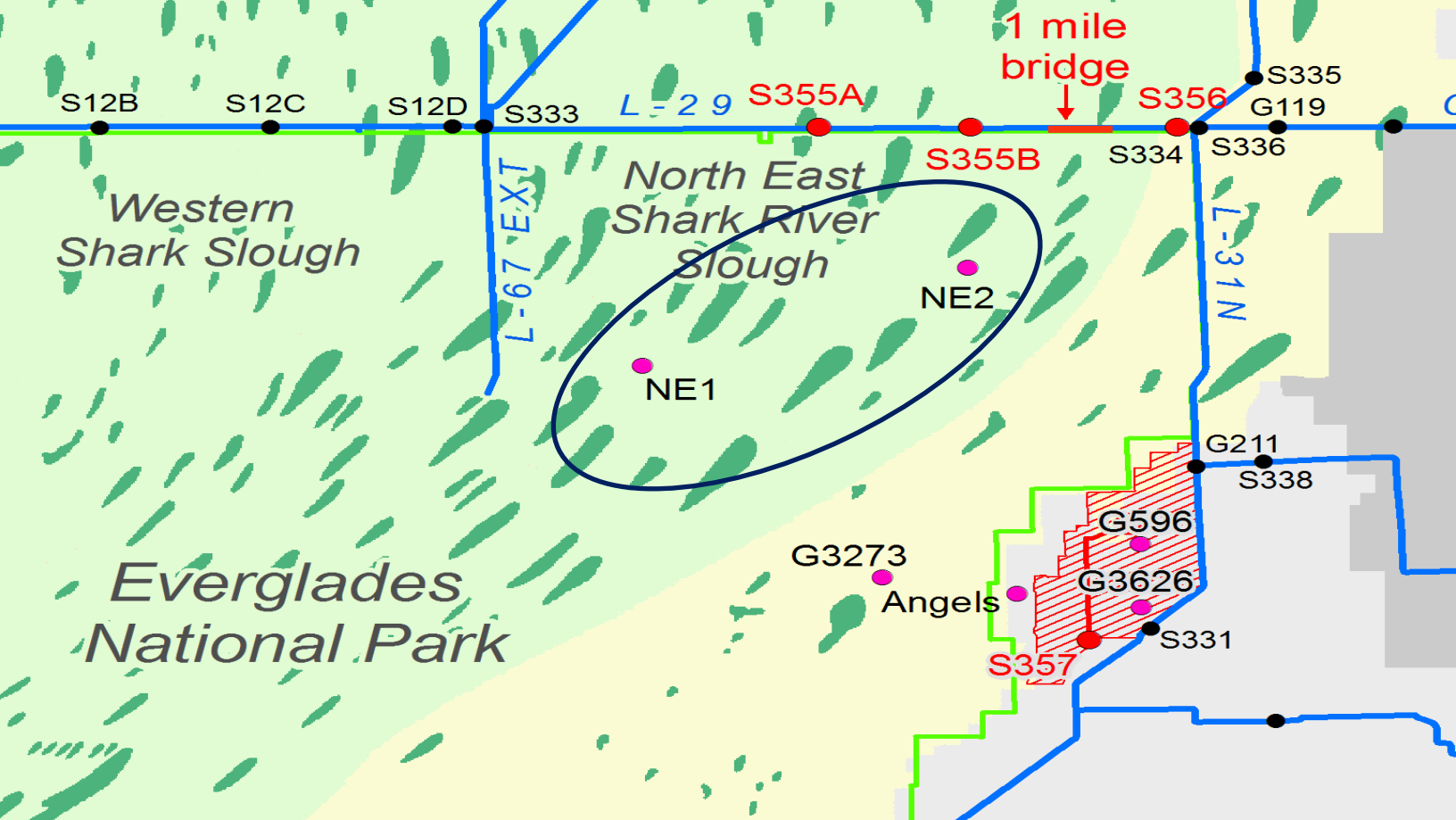
Increase flows into NESRS



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Water level and Hydroperiod

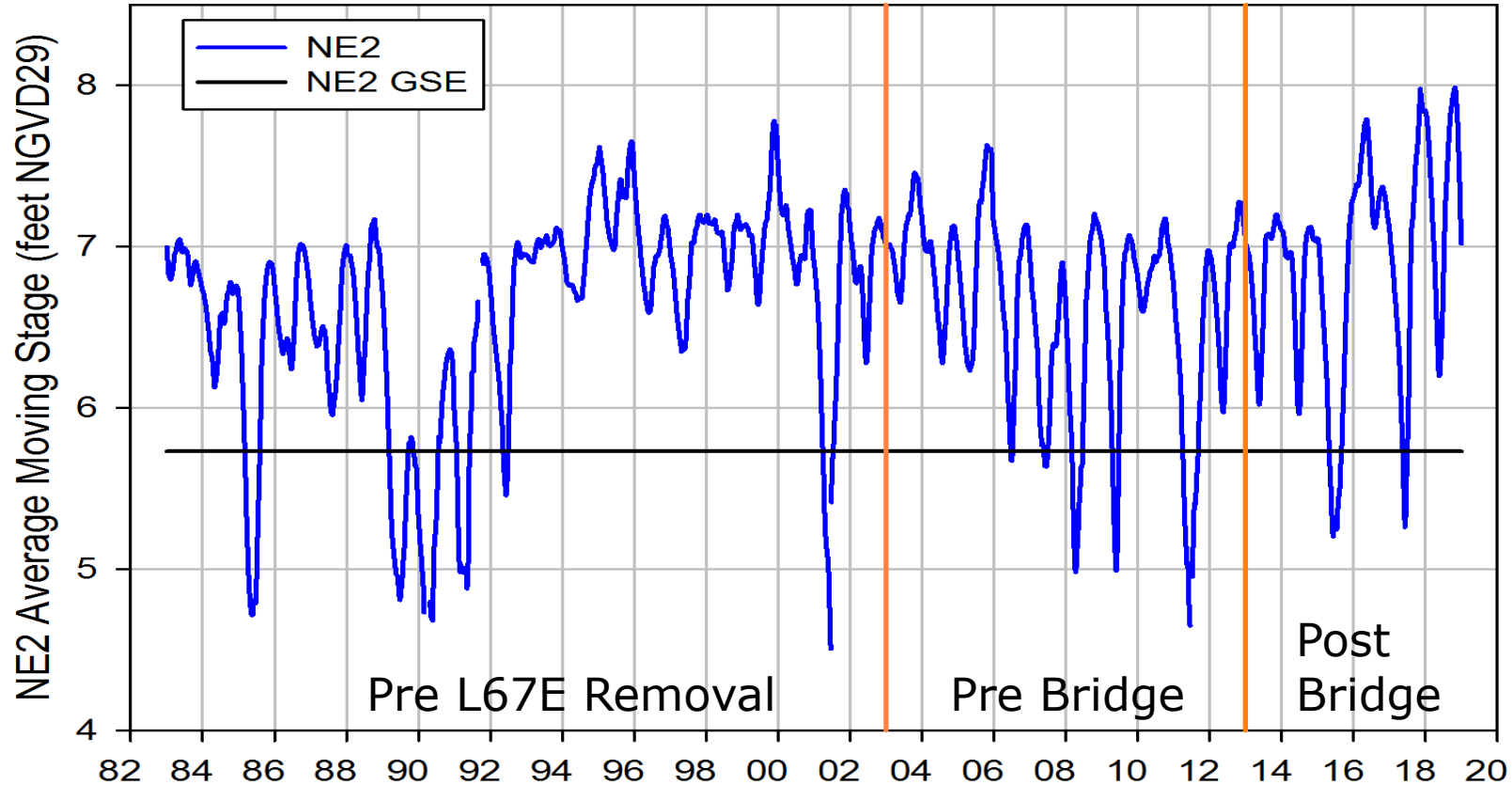


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Water level and Hydroperiod



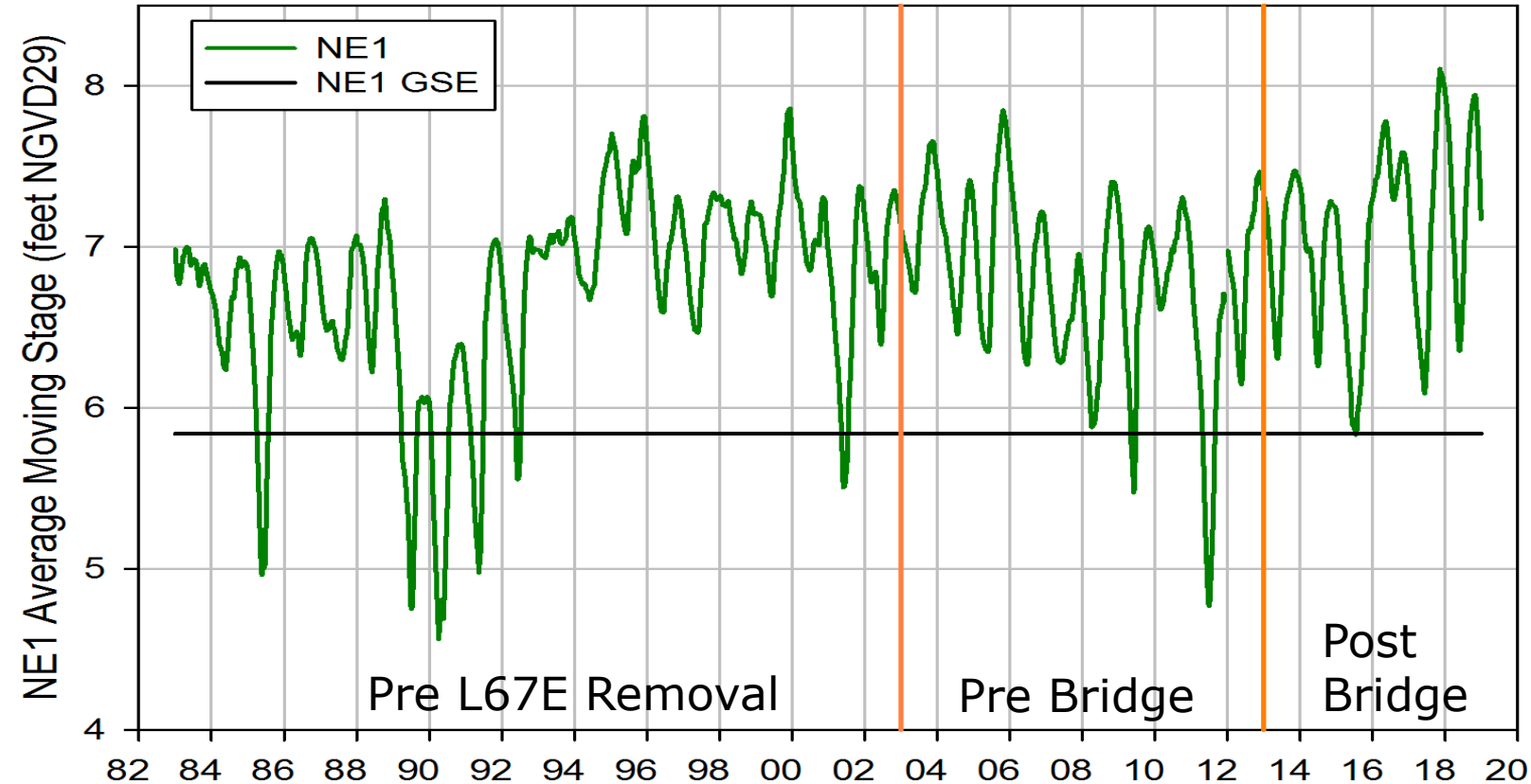
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Water level and Hydroperiod



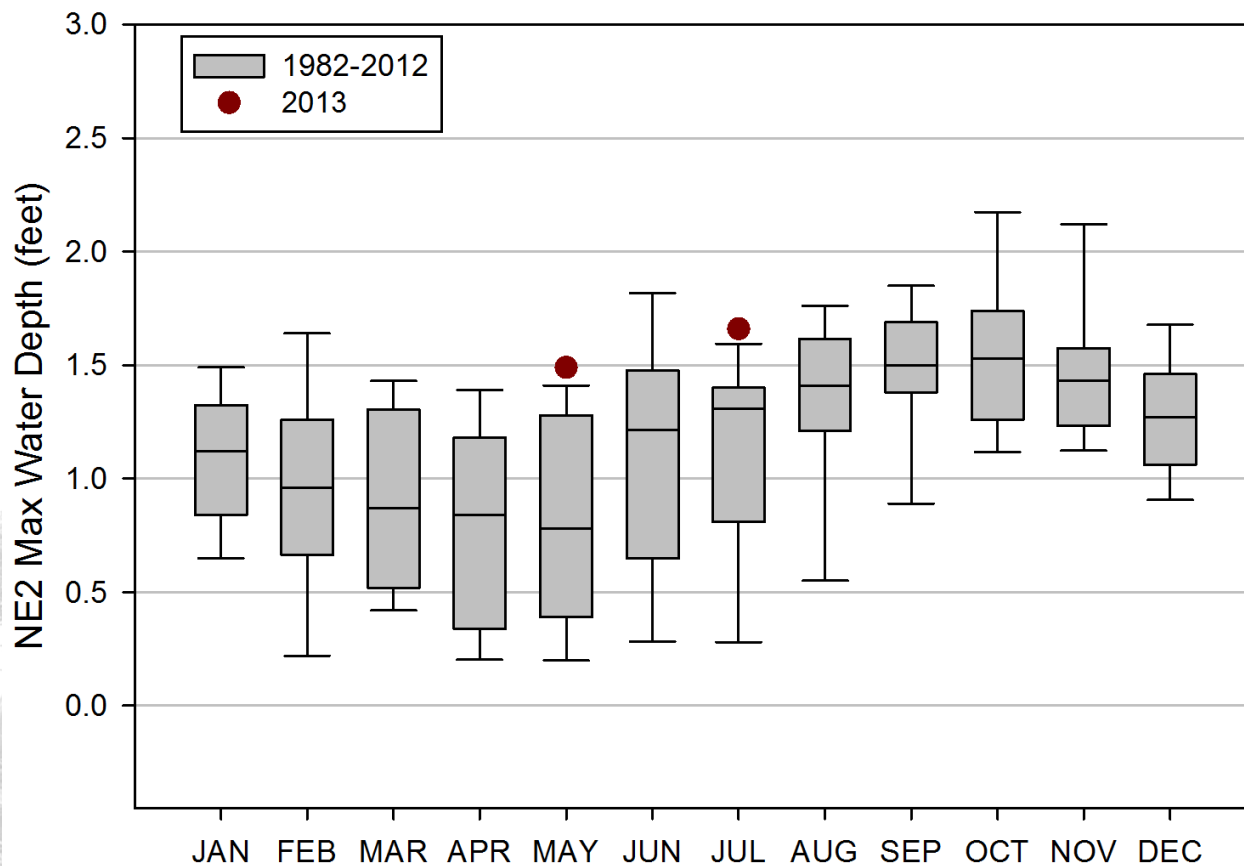
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Water level and Hydroperiod



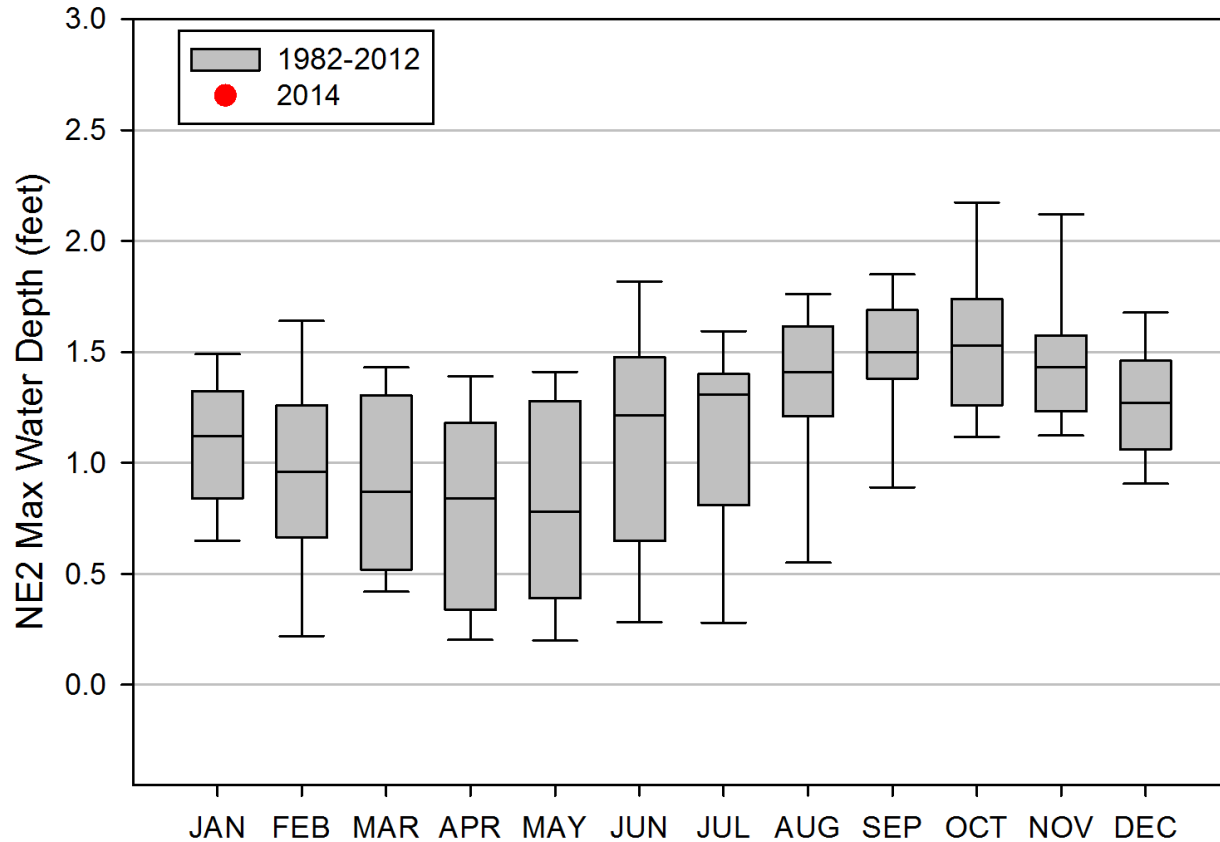
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Water level and Hydroperiod



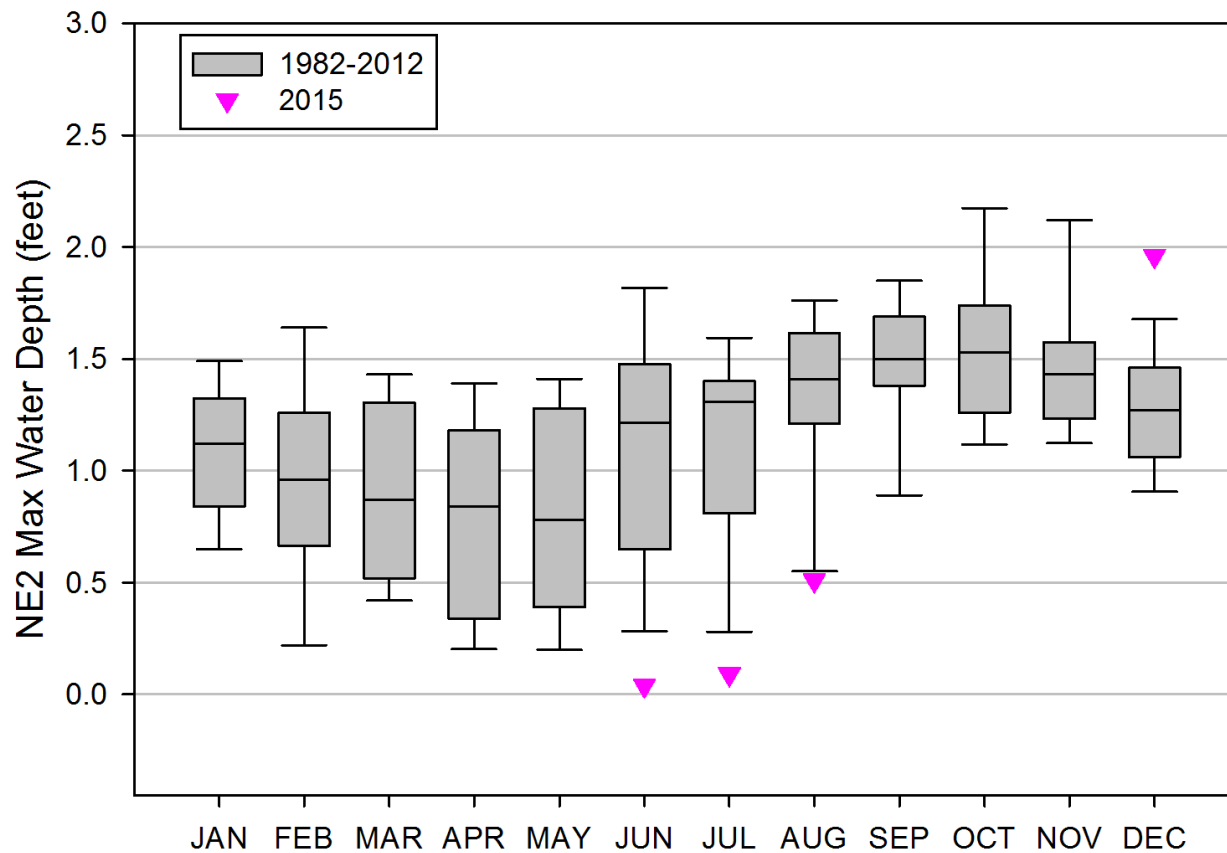
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Water level and Hydroperiod



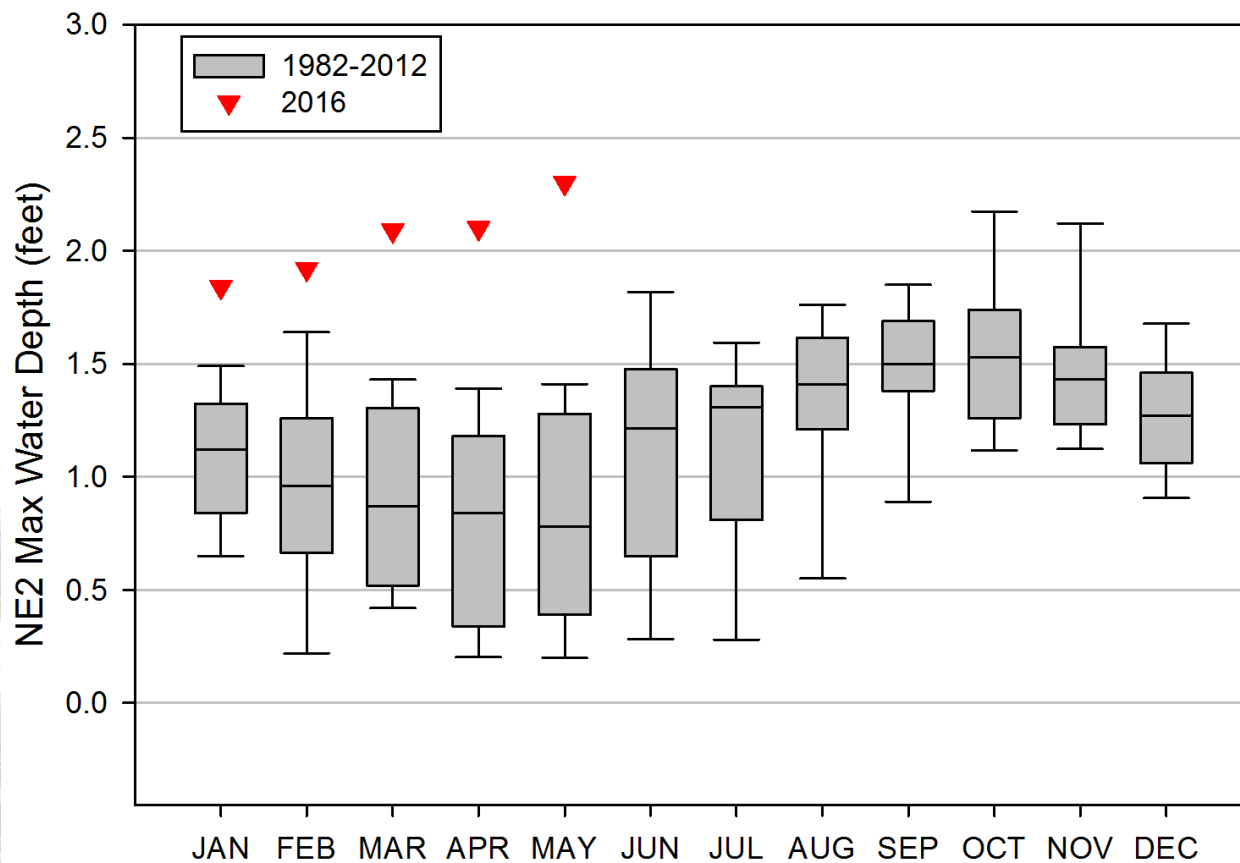
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Water level and Hydroperiod



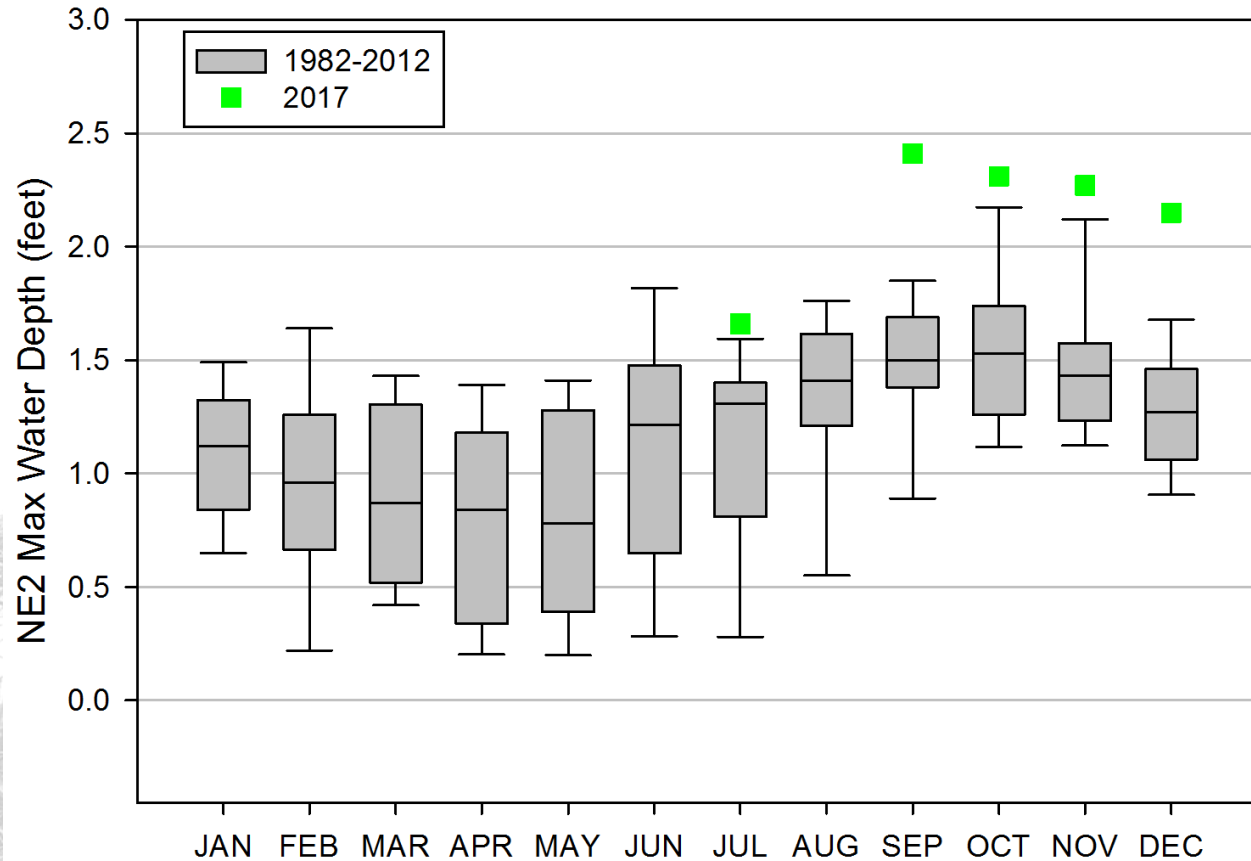
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Water level and Hydroperiod



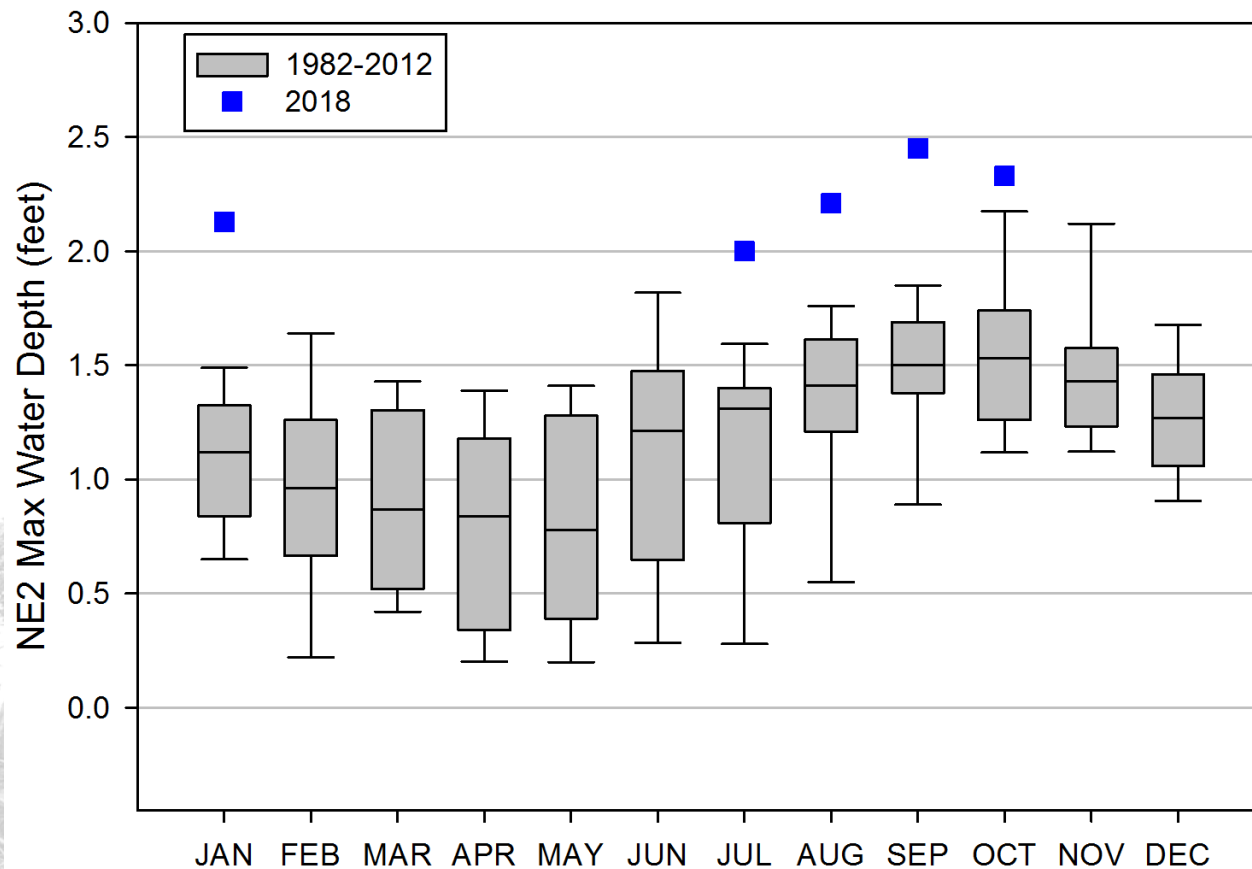
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Water level and Hydroperiod



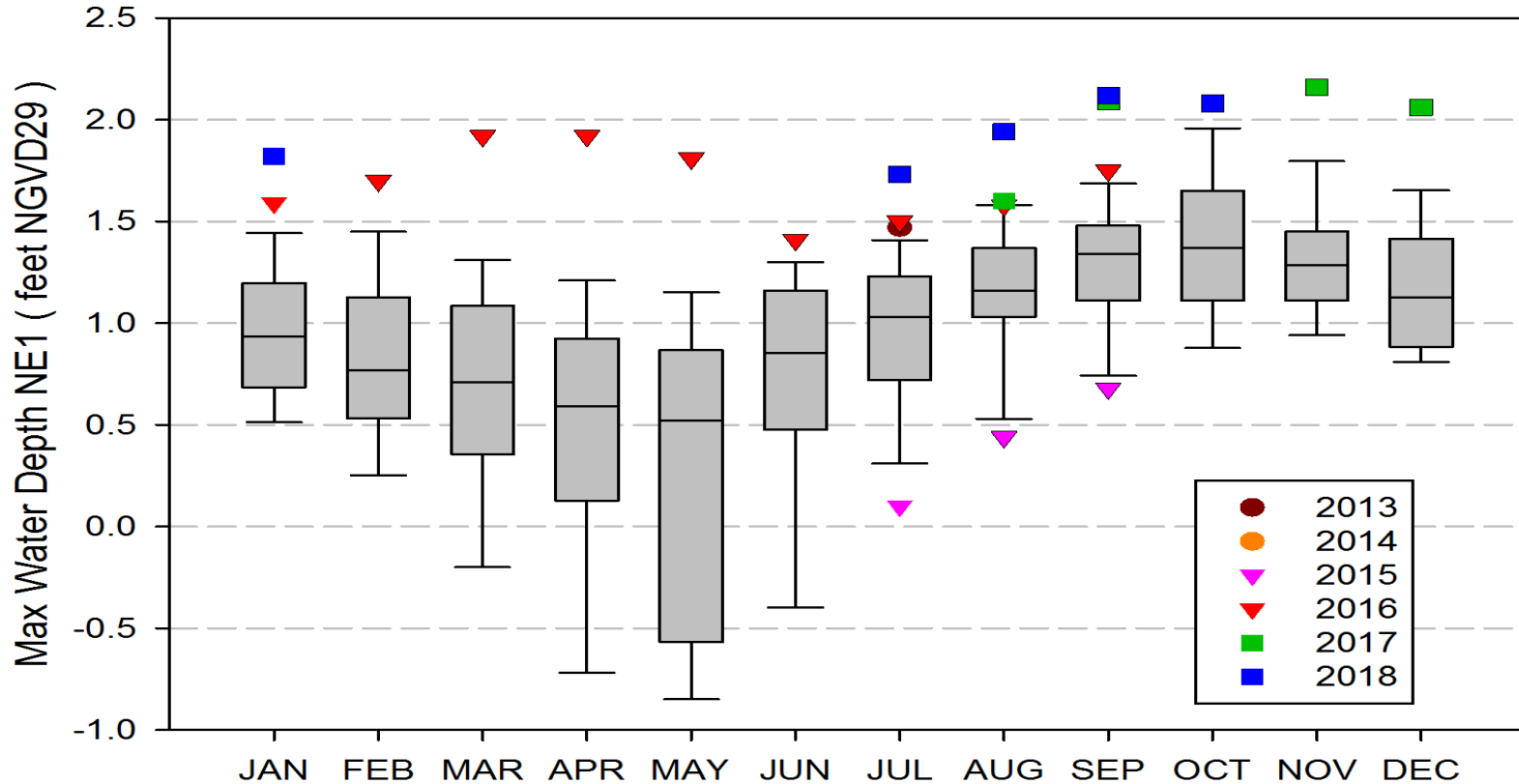
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Water level and Hydroperiod



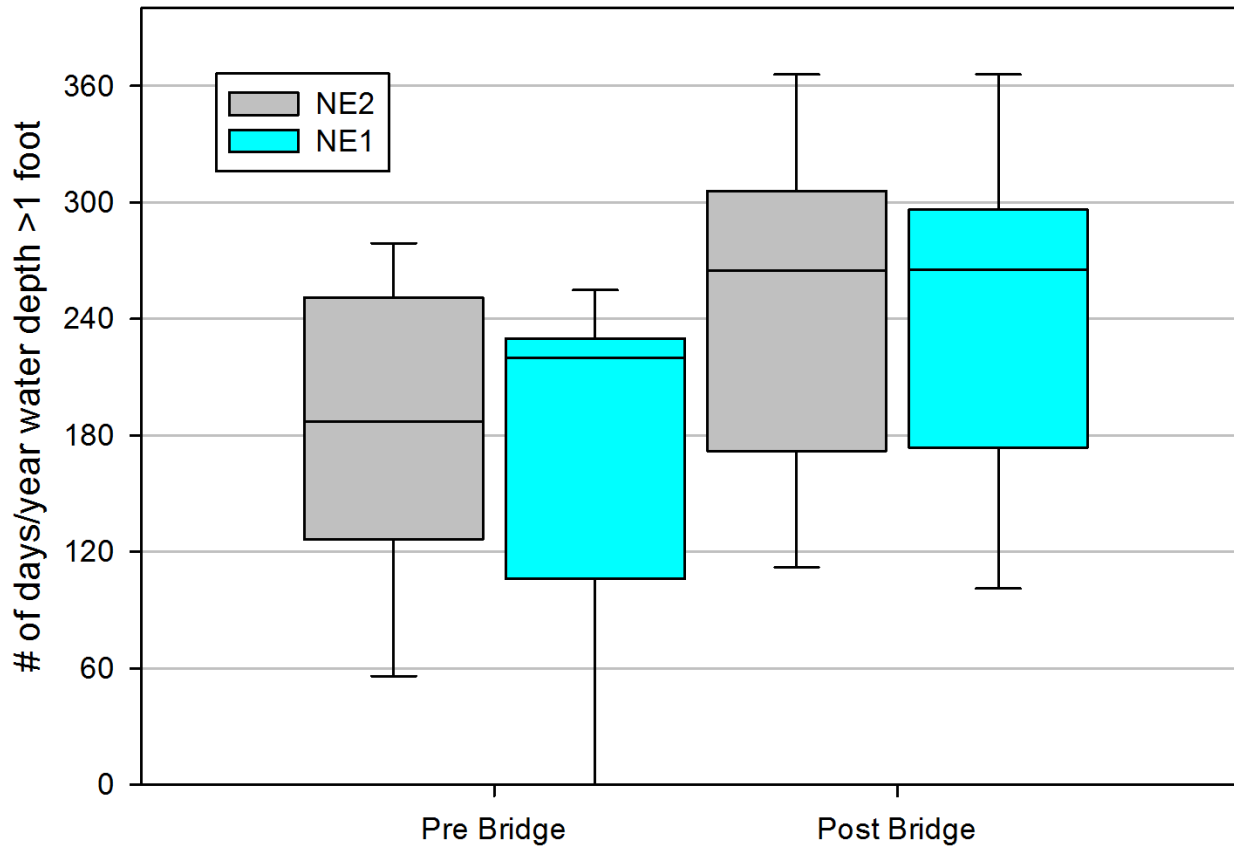
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Water level and Hydroperiod



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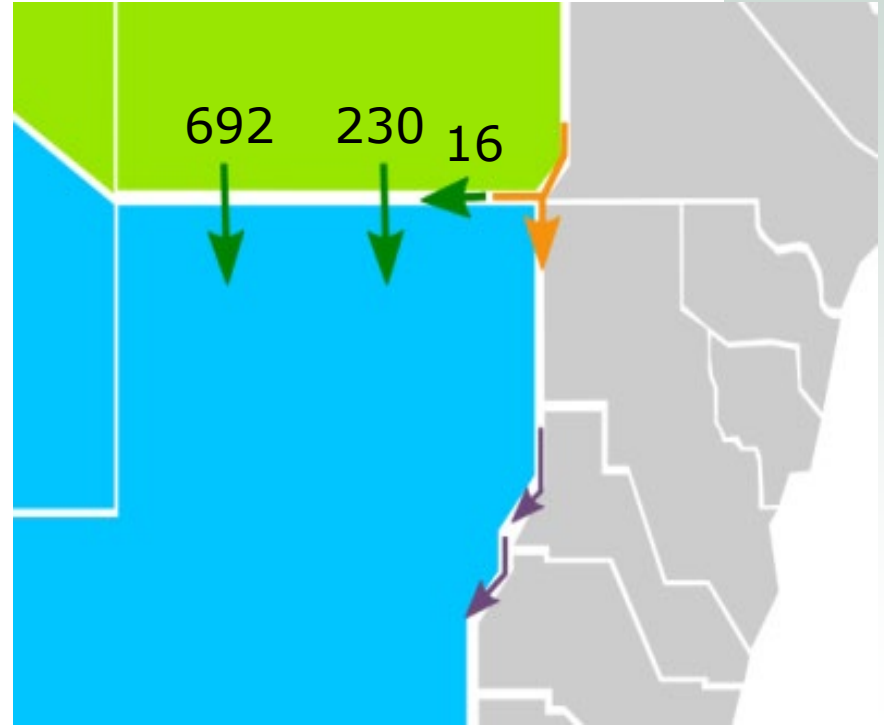
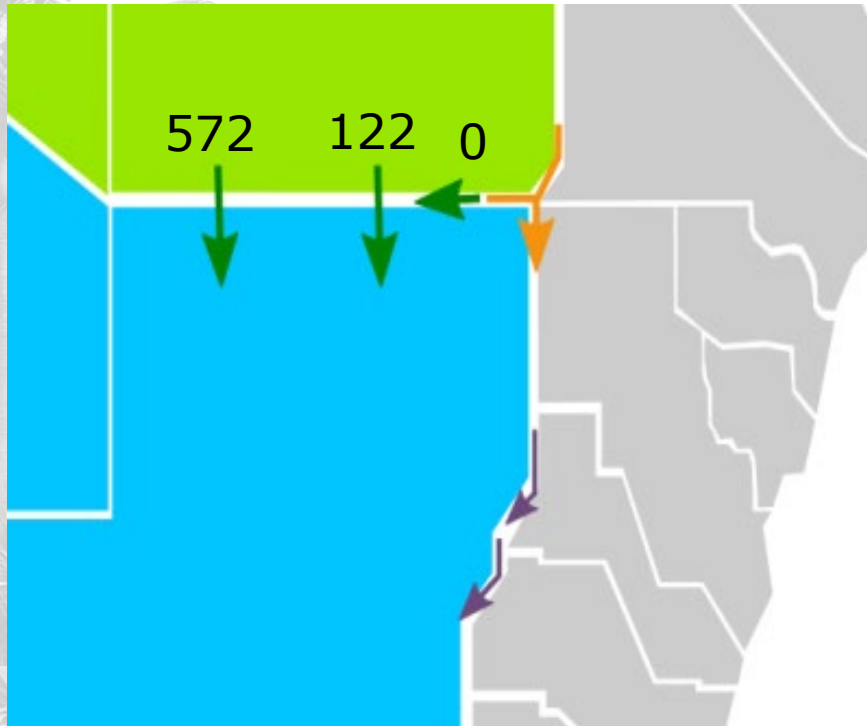
Improve Spatial Distribution



Average Annual Flow in Kaf
2003-2012

2013-2018

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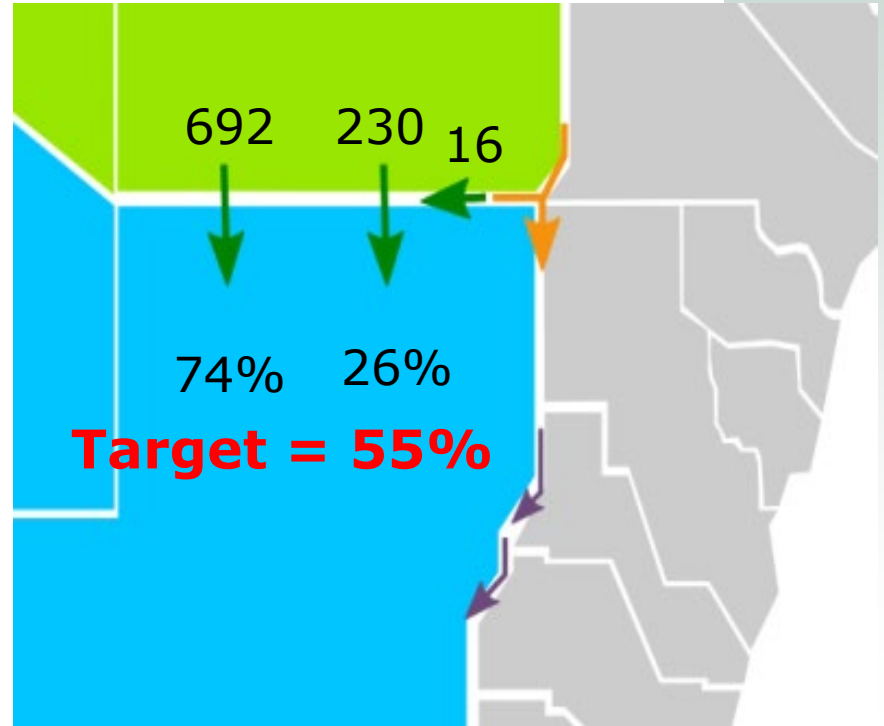
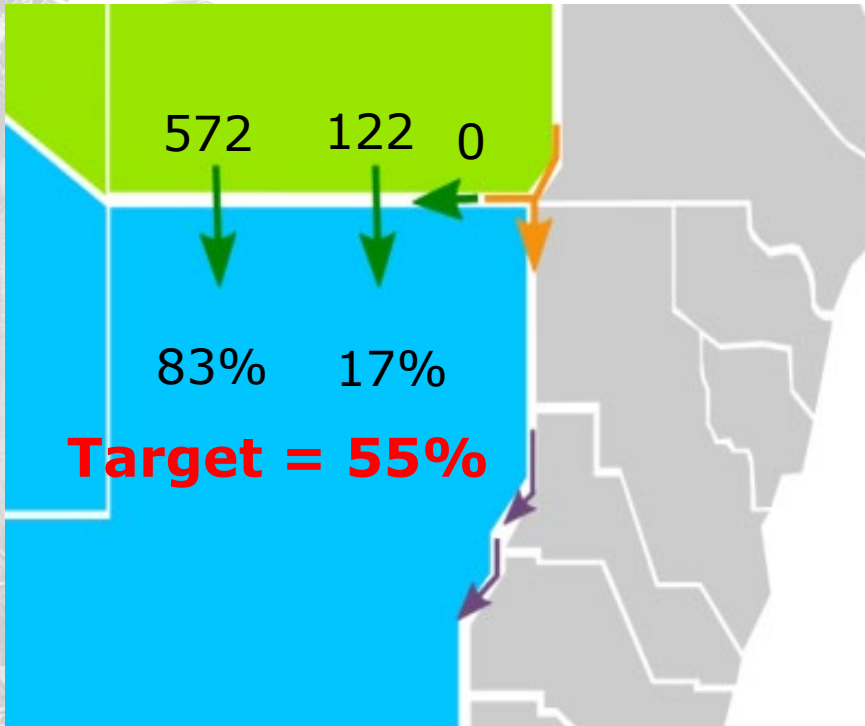


Improve Spatial Distribution



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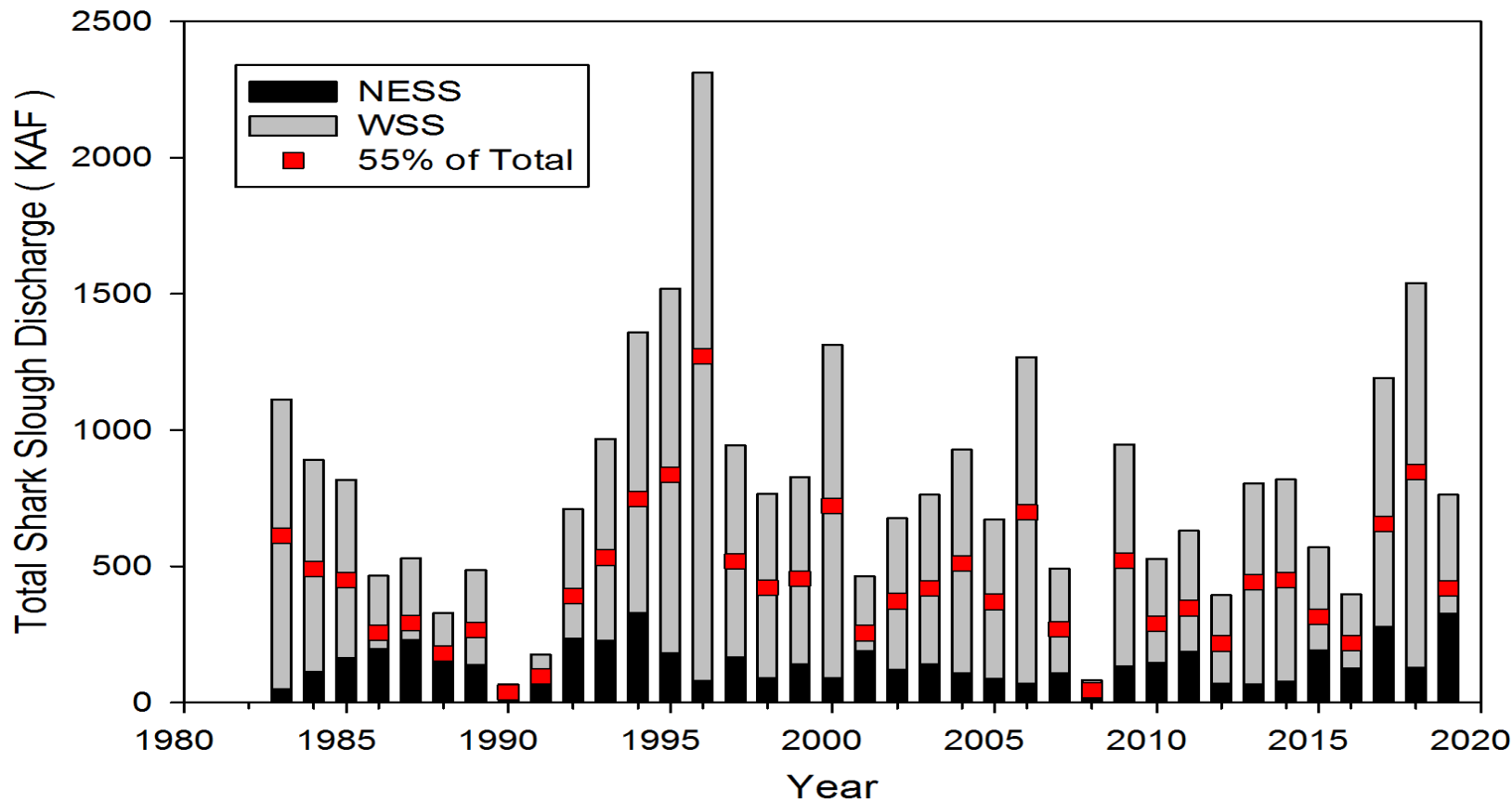
Average Annual Flow in Kaf 2003-2012



Improve Spatial Distribution



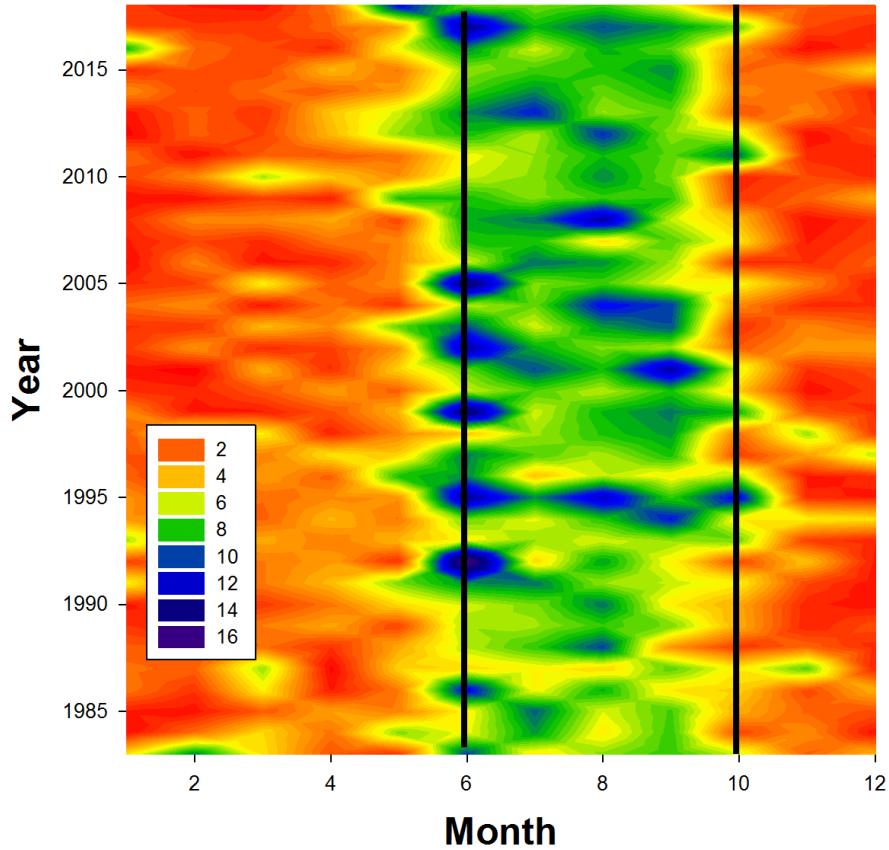
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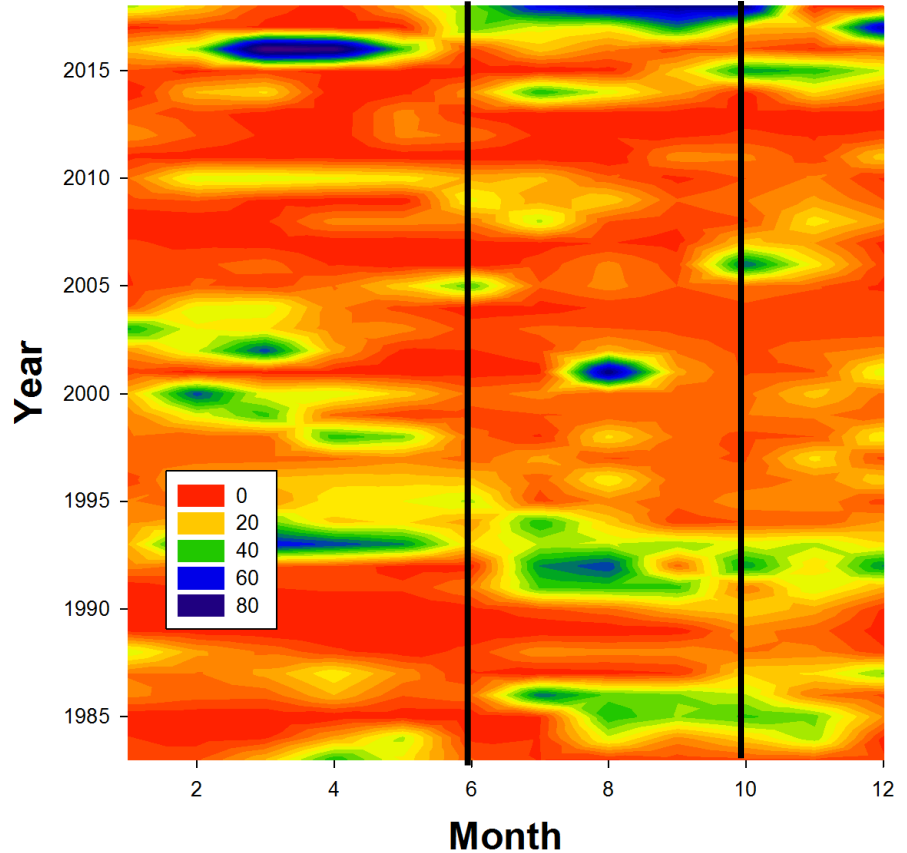
Improve Seasonal Distribution



Rainfall EVER SW Coast (in)



NESRS Inflow (KAF)





Summary:

Modwaters has increased the volume of water into NESRS

The one mile bridge makes it possible for more water to enter the park...

...but higher stage levels in the L29 canal is what actually increases the flow to Everglades National Park

Current discharge still does not meet target volumes

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Summary:

Stage and hydroperiod in North East Shark River Slough has increased, but are still short of targets

The spatial distribution of flow between NESRS and WSS has not improved

The seasonal distribution of flow improved in 2018, hopefully that will be the beginning of a long term trend

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